

ARGUMENTS/REMARKS

Applicants would like to thank the examiner for the careful consideration given the present application. The application has been carefully reviewed in light of the Office action, and amended as necessary to more clearly and particularly describe and claim the subject matter which applicants regard as the invention.

The Examiner has allowed claims 7-10 and 17-20.

The Examiner objected to claims 1 and 2 for formalities that are corrected by the amendments provided in this response. Hence, these objections are moot.

The Examiner objects to the drawings for not showing all of the features recited in claim 9, lines 22-35 and similarly in claim 19. Applicant disputes this objection. All of the cited elements of claim 9 are shown in FIGURE 5. Specifically, storage means are shown by example in items 514/518; address generating means are shown by example in items 513/516; phase shift means is shown by example in item 517; and first and second analog converting means are shown by example in items 515/519. The same analysis applies to claim 19. Accordingly, applicant is not providing amended drawings and applicant requests that the Examiner withdraw the objection.

The examiner objected to claims 4-6 and 14-16 as being dependent on a rejected base claim. Because applicant is traversing the rejection of the base claims, applicant requests that the Examiner withdraw this objection with the allowance of the base claims.

Claims 1 & 11 were rejected under 35 U.S.C. §102(e) as being anticipated by Ito *et al.* (U.S. 5,852,784). For the following reasons, the rejection is respectfully traversed.

Claim 1 recites a phase shifting means for “**shifting a phase** of said local oscillation signal **based upon said band switching signal** to thereby supply the phase-shifted local oscillation signal to said first quadrature mixers” (lines 16-20). Claim 11 recites similar language when “**shifting a phase** of said local oscillation signal **in response to said band switching signal** to thereby supply the phase-shifted local oscillation signal to a first quadrature mixer for converting either the reception signal or the reception intermediate frequency signal into a reception baseband signal” (lines 11-16). Ito does not suggest these limitations of claims 1 or 11.

The Examiner cites Ito switches 11 and 21 as being responsive to the operating frequency bands of the Ito device. However, switches 11 and 21 merely change the *frequencies* of the signals input to the demodulation circuit 13 by using the frequency divider item 22. There is no suggestion that a *phase* of an oscillation signal is changed in response to a band switching signal, as is recited in the claims. Shifting the phase of an oscillation signal is quite different than changing its frequency. One does not imply the other. This is supported by the general mathematical representation of an oscillation signal, which is:

$$F(t) = A \cdot \sin(\omega t + \theta);$$

Where ' $F(t)$ ' represents the signal, and ' A ' is the amplitude of the signal, ' ω ' is the frequency, and θ is the phase. Obviously, changing ω , which is taught by Ito, is not the same as changing θ , which is a phase change. In essence, the results of Ito change

$$F(t) = A \cdot \sin(\omega t + \theta);$$

to

$$F(t) = A \cdot \sin((\omega/2)t + \theta);$$

whereas the invention according to the claims might change:

$$F(t) = A \cdot \sin(\omega t + \theta);$$

to

$$F(t) = A \cdot \sin(\omega t + (\theta/2));$$

as an example. They are quite different results. Accordingly, the cited claim language does not read on Ito, and thus claims 1 and 11 are patentable over the reference.

Claims 2-3 and 12-13 were rejected under 35 U.S.C. §102(e) as being anticipated by Yamaguchi *et al.* (U.S. 5,966,666). For the following reasons, the rejection is respectfully traversed.

Claim 2 recites "phase shifting means for *shifting a phase* of said local oscillation signal *based upon said band switching signal* to thereby supply the phase-shifted local oscillation signal to said second quadrature mixers" (lines 17-31). Claim 3 recites similar language at lines 29-33, claim 12 recites similar language at lines 9-15, and claim 13 recites similar language at lines 13-17. Yamaguchi does not suggest these elements as limited by the recited claim language.

The same argument applies here as applied in the discussion above regarding claims 1 and 11 against Ito. Yamaguchi, like Ito, teaches that the frequency of the oscillator is changed using frequency dividers 41, 42, 44, & 45 in FIGURE 1 (and 51, 52, 53, & 54 in FIGURE 2). There is no suggestion that a *phase* of an oscillation circuit be changed in response to a band switching signal, as recited in the cited claims. Accordingly, claims 2-3 and 12-13 are patentable over Yamaguchi.

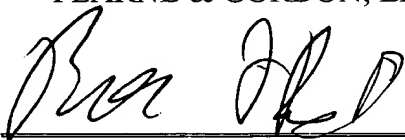
Finally, new claims 21 and 22 have similar limitations as those discussed above, and thus are also patentable over the references.

In consideration of the foregoing analysis, it is respectfully submitted that the present application is in a condition for allowance and notice to that effect is hereby requested. If it is determined that the application is not in a condition for allowance, the examiner is invited to initiate a telephone interview with the undersigned attorney to expedite prosecution of the present application.

If there are any additional fees resulting from this communication, please charge same to our Deposit Account No. 16-0820, our Order No. 32430.

Respectfully submitted,

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August 5, 2003